

**WHAT IS CLAIMED IS:**

1. A method for reducing the number of exploitable vulnerabilities in a software application, said method comprising:
    - creating a vulnerability knowledge database comprising one or more classes of known software vulnerabilities;
    - applying a code parser to the software application to generate an abstract syntax tree;
    - comparing the abstract syntax tree and the classes of known software vulnerabilities to identify a set of potential exploitable software vulnerabilities; and
    - performing a static analysis of the set of potential exploitable software vulnerabilities wherein the static analysis is flow sensitive analysis of a list of constraints, and wherein the results of the static analysis comprise a set of exploitable software vulnerabilities.